

Handwritten initials and signature in the top right corner.

DOCKET NO. 01-C-084 (STMI01-01084)
Customer No. 30425

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Harry M. Siegel, et al.
Serial No.: 10/066,245
Filed: January 31, 2002
For: METHOD FOR USING A PRE-FORMED FILM IN A
TRANSFER MOLDING PROCESS FOR AN
INTEGRATED CIRCUIT (AS AMENDED)
Group No.: 1732
Examiner: Angela Y. Ortiz

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUBSTITUTE APPEAL BRIEF

In response to the Notice of Non-Compliant Appeal Brief dated July 13, 2006, the Applicants respectfully submit this Substitute Appeal Brief.

The Appellants have appealed to the Board of Patent Appeals and Interferences from the decision of the Examiner dated November 16, 2005, finally rejecting Claims 1, 2, 4, 5, 7-13, 15, 16, and 30-37. The Appellants filed a Notice of Appeal on February 16, 2006, which was received by the U.S. Patent and Trademark Office on February 21, 2006. The Appellants respectfully submit this brief on appeal with the appropriate statutory fee.

REAL PARTY IN INTEREST

This application is currently owned by STMicroelectronics, Inc. as indicated by an assignment recorded on January 31, 2002 in the Assignment Records of the U.S. Patent and Trademark Office at Reel 012562, Frame 0766.

RELATED APPEALS AND INTERFERENCES

There are no known appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in this pending appeal.

STATUS OF CLAIMS

Claims 1, 2, 4, 5, 7-13, 15, 16, and 30-37 have been rejected pursuant to a final Office Action dated November 16, 2005. Claims 3, 6, 14, and 17-29 have been cancelled. Claims 1, 2, 4, 5, 7-13, 15, 16, and 30-37 are presented on appeal. A copy of the claims is provided in Appendix A.

STATUS OF AMENDMENTS

An AMENDMENT AND RESPONSE to the final Office Action dated November 16, 2005 was filed on January 17, 2006. According to the Advisory Action dated February 7, 2006, the AMENDMENT AND RESPONSE was entered and considered by the Examiner.

SUMMARY OF CLAIMED SUBJECT MATTER

Regarding Claim 1, a method for using a pre-formed film in a transfer molding process is

provided. (*Application, Page 20, Lines 8-12*). The transfer molding process is of a type that uses a transfer mold 100 to encapsulate portions of an integrated circuit 180 within a molding compound. (*Application, Page 20, Line 13 – Page 21, Line 7*). The method includes providing a film 600 of compliant material and pre-forming the film 600 of compliant material to at least approximately conform a shape of the film 600 to a mold cavity surface 140 of the transfer mold 100. (*Application, Page 20, Lines 13-16*). The method also includes placing the pre-formed film 600 of compliant material within the transfer mold 100 adjacent to the mold cavity surface 140 of the transfer mold 100 and vacuum holding the pre-formed film 600 of compliant material against the mold cavity surface 140 of the transfer mold 100. (*Application, Page 20, Lines 16-21*).

Regarding Claim 7, a method for using a pre-formed film in a transfer molding process is provided. (*Application, Page 20, Lines 8-12*). The transfer molding process is of a type that uses a transfer mold 100 to encapsulate portions of an integrated circuit 180 within a molding compound. (*Application, Page 20, Line 13 – Page 21, Line 7*). The method includes providing a tape 700 made of a film 600 of compliant material and pre-forming a plurality of portions 710-720 of the tape 700 to at least approximately conform a shape of each of the plurality of portions 710-720 of the tape 700 to a mold cavity surface 140 of the transfer mold 100. (*Application, Page 20, Lines 13-16; Page 18, Lines 4-13*). The method also includes placing one of the plurality of portions 710-720 of the tape 700 within the transfer mold 100 adjacent to the mold cavity surface 140 of the transfer mold 100. (*Application, Page 20, Lines 16-21; Page 18, Lines 14-20*).

Regarding Claim 12, a method for using a pre-formed film in a transfer molding process is provided. (*Application, Page 20, Lines 8-12*). The transfer molding process is of a type that uses a

top half 810 of a transfer mold 800 and a bottom half 820 of a transfer mold 800 to encapsulate portions of an integrated circuit 180 within a molding compound. (*Application, Page 19, Lines 5-11*). The method includes providing a first film 830 of compliant material and pre-forming the first film 830 of compliant material to at least approximately conform a shape of the first film 830 to a mold cavity surface of the top half 810 of the transfer mold 800. (*Application, Page 19, Lines 12-15*). The method also includes placing the pre-formed first film 830 of compliant material within the top half 810 of the transfer mold 800 adjacent to the mold cavity surface of the top half 810 of the transfer mold 800. (*Application, Page 19, Lines 12-15*). The method further includes providing a second film 840 of compliant material and pre-forming the second film 840 of compliant material to at least approximately conform a shape of the second film 840 to a mold cavity surface of the bottom half 820 of the transfer mold 800. (*Application, Page 19, Lines 15-17*). The method also includes placing the pre-formed second film 840 of compliant material within the bottom half 820 of the transfer mold 800 adjacent to the mold cavity surface of the bottom half 820 of the transfer mold 800. (*Application, Page 19, Lines 15-17*). In addition, the method includes vacuum holding at least one of the pre-formed films 830, 840 of compliant material against at least one of the mold cavity surfaces of the transfer mold 800.

GROUND OF REJECTION

1. Claims 1, 2, 4, 5, 7-13, 15, 16, and 30-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,226,997 to Vallier ("*Vallier*") in view of U.S. Patent No. 5,846,477 to Hotta et al. ("*Hotta*") or U.S. Patent No. 6,652,799 to Seng et al. ("*Seng*").

ARGUMENT

I. GROUND OF REJECTION #1

The rejection of Claims 1, 2, 4, 5, 7-13, 15, 16, and 30-37 under 35 U.S.C. § 103(a) is improper and should be withdrawn.

A. OVERVIEW

Claims 1, 2, 4, 5, 7-13, 15, 16, and 30-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,226,997 to Vallier (“*Vallier*”) in view of U.S. Patent No. 5,846,477 to Hotta et al. (“*Hotta*”) or U.S. Patent No. 6,652,799 to Seng et al. (“*Seng*”).

B. STANDARD

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. (MPEP § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992)). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. (MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984)). Only when a *prima facie* case of obviousness is established does the burden shift to the Appellants to produce evidence of nonobviousness. (MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993)). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the Appellants are entitled

to grant of a patent. (*In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985)).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. (*In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993)). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on the Appellant's disclosure. (MPEP § 2142).

C. THE VALLIER REFERENCE

Vallier recites a "preform assembly" for use within a resin transfer molding apparatus. (*Abstract*). The preform assembly includes an upper liner 12 and a lower liner 14. (*Col. 3, Lines 23-25*). A dry fabric preform 10 is placed between the upper and lower liners 12, 14 to form the preform assembly. (*Col. 3, Lines 37-42*). The preform assembly is placed between upper and lower mold halves 20, 25. (*Col. 3, Lines 46-52*). The upper and lower liners 12, 14 are "formed by conventional methods to the shape of a first mold half and a second mold half, respectively." (*Col. 3, Lines 25-27*). *Vallier* recites how one possible "conventional method" involves heating each liner

and placing each liner on a “forming mold,” which represents a “prototype” of a mold half. (*Col. 4, Lines 23-30*). The forming mold “dimensionally simulates” a mold half. (*Col. 4, Lines 29-31*).

D. THE HOTTA REFERENCE

Hotta recites a method for producing a semiconductor device by encapsulating a semiconductor element with resin. (*Abstract*). As part of this process, two films 41-42 may be provided for two molds 13-14. (*Col. 8, Lines 3-15*). The films 41-42 are held against the molds 13-14 using suction. (*Col. 8, Lines 12-15*).

E. THE SENG REFERENCE

Seng recites a molding apparatus for molding semiconductor components. (*Abstract*). A film 38 may be placed between the semiconductor component being encapsulated and a mold chase 12. (*Col. 4, Line 65 – Col. 5, Line 5*). Vacuum forces are used to pull the film 38 into cavities 16 in the mold chase 12. (*Col. 5, Lines 14-30*).

F. CLAIMS 1, 4, 5, 12, 15, 16, AND 37

Claim 1 recites a method for using a pre-formed film in a transfer molding process, where the transfer molding process is of a type that uses a transfer mold to encapsulate portions of an integrated circuit within a molding compound. The method includes:

providing a film of compliant material;
pre-forming the film of compliant material to at least
approximately conform a shape of the film to a mold cavity surface of

the transfer mold;
 placing the pre-formed film of compliant material within the
transfer mold adjacent to the mold cavity surface of the transfer mold;
and
 vacuum holding the pre-formed film of compliant material
against the mold cavity surface of the transfer mold.

The Examiner acknowledges that *Vallier* fails to disclose “vacuum holding” a “pre-formed film of compliant material” against a “mold cavity surface” of a “transfer mold” as recited in Claim 1. (11/16/05 Office Action, Page 3, Second paragraph). The Examiner asserts that *Hotta* or *Seng* discloses these elements of Claim 1 and that it would be obvious to modify *Vallier* with either of these references. (11/16/05 Office Action, Page 3, Last paragraph – Page 4, Second paragraph).

The Examiner states that it would be obvious to modify *Vallier* with either *Hotta* or *Seng* because of the various benefits provided by the “vacuum holding means” disclosed in *Hotta* or *Seng*. For example, the Examiner asserts that the “vacuum holding means” of *Hotta* or *Seng* would allow the liners 12, 14 of *Vallier* to be held “on the mold surface as shown in both added references.” (11/16/05 Office Action, Page 4, Second paragraph). However, the Examiner fails to establish that this benefit is needed or even desired in the system of *Vallier*.

The entire preform assembly (the upper liner 12, the fabric preform 10, and the lower liner 14) in *Vallier* is simply laid onto the lower mold half 25. The preform assembly may be positioned based on the ports 22’ that are part of or attached to the liners 12, 14. Gravity maintains the preform assembly in place, and the mold halves 20, 25 are closed to allow resin to be injected around the fabric preform 10.

Absolutely nothing here indicates that the preform assembly of *Vallier* needs to be held by a

vacuum against the upper mold half 20 or against the lower mold half 25. The Examiner never shows that the preform assembly of *Vallier* requires or would benefit from the use of “vacuum holding means.”

Not only that, the modification proposed by the Examiner would now require two different vacuum mechanisms to be provided in *Vallier*. The first vacuum mechanism would be needed to hold the preform assembly against one or both of the mold halves 20, 25. The second vacuum mechanism would be needed, as described in *Vallier*, to evacuate air from between the liners 12, 14. (*Col. 5, Lines 14-20*). This modification would therefore increase the cost and complexity of the molding apparatus of *Vallier*, without providing any benefit as noted above.

Beyond that, *Hotta* and *Seng* use vacuum forces to (i) shape a film and (ii) hold the film in place. Regarding the first use, the liners 12, 14 of *Vallier* are pre-formed into particular shapes, so the vacuum forces used in *Hotta* and *Seng* are not needed in *Vallier* to shape the liners 12, 14. Regarding the second use, as noted above, the entire preform assembly of *Vallier* is formed by simply stacking various elements 10, 12, 14 on top of each other and then placing the assembly onto the lower mold half 25. The preform assembly remains in place on the lower mold half 25 because of gravity and the alignment of the ports 22'. The Examiner provides no explanation as to why the preform assembly of *Vallier* would need to be held against the lower mold half 25 or against the upper mold half 20 using vacuum forces. As a result, there is absolutely no reason to use vacuum forces to hold a liner against the lower mold half or the upper mold half in *Vallier*.

In addition, the Examiner notes that the vacuum forces of *Seng* may be reversed to eject a molded product from a cavity. (*11/16/05 Office Action, Page 4, First paragraph*). However, Claim 1

recites vacuum holding a pre-formed film “against” a mold cavity surface of a transfer mold. As a result, the use of vacuum forces (or more specifically, the reverse of vacuum forces) to eject a molded product from a cavity is insufficient to render Claim 1 obvious.

The § 103 rejection of Claim 1 relies solely on the assertion that it would be obvious to modify *Vallier* to include the “vacuum holding means” of *Hotta* or *Seng*. However, there is absolutely no need to vacuum hold either of the liners 12, 14 of *Vallier* to either of the mold halves 20, 25 of *Vallier*. The proposed benefits of using the “vacuum holding means” of *Hotta* or *Seng* would not be provided in the system of *Vallier* – the vacuum holding is not needed to form the liners 12, 14 or to hold the liners 12, 14 against the mold halves 20, 25 of *Vallier*. If anything, the proposed modification would simply increase the cost and complexity of *Vallier* without providing any benefit.

At most, the Examiner has shown that it might be conceivable to modify *Vallier*, without showing that a person skilled in the art would actually be motivated to modify *Vallier* as proposed by the Examiner. The Examiner has not and cannot show that a person skilled in the art would be motivated to modify *Vallier* with *Hotta* or *Seng* to reach the Applicants’ claimed invention as required by § 103.

For these reasons, the Examiner has not established a *prima facie* case of obviousness against Claim 1 (and its dependent claims). For similar reasons, the Examiner has not established a *prima facie* case of obviousness against Claim 12 (and its dependent claims). Accordingly, the Appellants respectfully request that the § 103 rejection of Claims 1, 4, 5, 12, 15, 16, 36, and 37 be withdrawn and that Claims 1, 4, 5, 12, 15, 16, 36, and 37 be passed to allowance.

G. CLAIMS 7, 9-11, 30-32, 34, AND 35

Claim 7 recites a method for using a pre-formed film in a transfer molding process, where the transfer molding process is of a type that uses a transfer mold to encapsulate portions of an integrated circuit within a molding compound. The method includes:

providing a tape made of a film of compliant material;
pre-forming a plurality of portions of the tape to at least approximately conform a shape of each of the plurality of portions of the tape to a mold cavity surface of the transfer mold; and
placing one of the plurality of portions of the tape within the transfer mold adjacent to the mold cavity surface of the transfer mold.

None of the cited references discloses, teaches, or suggests pre-forming multiple “portions” of a tape to “at least approximately conform a shape” of each portion to a “mold cavity surface” of a “transfer mold.” Also, the Examiner makes absolutely no attempt to explain how Claim 7 is rendered obvious by the cited references. In fact, the Examiner fails to even mention Claim 7 in any way in the November 16, 2005 Office Action, except to assert that the “limitations of claim 7 are fully addressed in the prior art combination set forth above.” (*11/16/05 Office Action, Page 6, Second paragraph*). However, the Examiner never points out where the limitations of Claim 7 are “fully addressed” in the “prior art combination set forth above.”

Moreover, *Vallier* clearly recites how the liners 12, 14 may be formed. In particular, *Vallier* recites heating a liner, placing the liner on a forming mold to shape the liner, and allowing the liner to cool while on the forming mold. (*Col. 4, Lines 23-37*). The Examiner fails to explain how *Vallier* could be modified to pre-form multiple portions of the same piece of material. In theory, one way could be to use multiple forming molds to form multiple portions of the same liner. However, this

option is undesirable since this modification would require multiple forming molds for the upper liner 12 and multiple forming molds for the lower liner 14, and molds are expensive. Another way could be to heat a liner, place a first portion of the liner over a forming mold, cool the liner, and then repeat the process to form a second portion of the liner. However, heating the liner to form the second portion would also heat the first portion of the liner, thereby changing the shape of the first portion.

In effect, the Examiner has simply assumed that *Vallier* could be modified to pre-form multiple liners on a single piece of material. The Examiner has never shown or explained how *Vallier* could be modified to actually perform these steps.

For these reasons, the Examiner has not established a *prima facie* case of obviousness against Claim 7 (and its dependent claims). For similar reasons, the Examiner has not established a *prima facie* case of obviousness against Claims 30 and 34 (and their dependent claims). Accordingly, the Appellants respectfully request that the § 103 rejection of Claims 7, 9-11, 30-32, 34, and 35 be withdrawn and that Claims 7, 9-11, 30-32, 34, and 35 be passed to allowance.

H. CLAIMS 2, 8, AND 13

Claim 2 recites that the step of pre-forming a film of compliant material is carried out immediately before the film is placed within a transfer mold. The Examiner cites column 5, lines 13-15 of *Vallier* as anticipating these elements of Claim 2. (11/16/05 Office Action, Page 3, First paragraph). However, the cited portion of *Vallier* simply recites that the preform assembly is loaded into a molding apparatus. (Col. 5, Lines 13-15). This portion of *Vallier* lacks any mention of when

the preform assembly is formed before being loaded into the molding apparatus.

In fact, the cited portion of *Vallier* actually occurs right after *Vallier* explicitly describes storing the preform assemblies for later use (in other words, after assembly and before use). (*Col. 5, Lines 9-12*). If anything, this explicitly teaches away from the claimed invention of pre-forming a film of compliant material “immediately before” the film is placed within a transfer mold

For these reasons, the Examiner has not established a *prima facie* case of obviousness against Claim 2. For similar reasons, the Examiner has not established a *prima facie* case of obviousness against Claims 8 and 13. Accordingly, the Appellants respectfully request that the § 103 rejection of Claims 2, 8, and 13 be withdrawn and that Claims 2, 8, and 13 be passed to allowance.

I. CLAIMS 33 AND 36

Claim 33 recites that a “tape made of a film of compliant material” comprises a “silicone coated latex saturated paper liner.”

Seng simply recites that a film may be formed from a polymer (such as glass cloth) and that a heat resistant releasing agent (such as silicone or a silicone resin) may be used. (*Col. 6, Lines 13-20*). *Hotta* simply recites that films such as polyester or polyimide films could be used, and a silicone resin could be placed on the film. (*Col. 3, Lines 26-35*). Neither reference discloses, teaches, or suggests using a “silicone coated latex saturated paper liner.”

For these reasons, the Examiner has not established a *prima facie* case of obviousness against Claim 33. For similar reasons, the Examiner has not established a *prima facie* case of obviousness against Claim 36. Accordingly, the Appellants respectfully request that the § 103 rejection of Claims

DOCKET NO. 01-C-084 (STMI01-01084)
SERIAL NO. 10/066,245
PATENT

33 and 36 be withdrawn and that Claims 33 and 36 be passed to allowance.

SUMMARY


The Appellants have demonstrated that the present invention as claimed is clearly distinguishable over the prior art cited of record. Therefore, the Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the final rejection of the Examiner and instruct the Examiner to issue a notice of allowance of all claims.

The Appellants have enclosed the appropriate fee to cover the cost of this APPEAL BRIEF. The Appellants do not believe that any additional fees are due. However, the Commissioner is hereby authorized to charge any additional fees (including any extension of time fees) or credit any overpayments to Deposit Account No. 50-0208.

Respectfully submitted,

MUNCK BUTRUS, P.C.

Date: Aug. 11, 2006



William A. Munck
Registration No. 39,308

P.O. Drawer 800889
Dallas, Texas 75380
(972) 628-3600 (main number)
(972) 628-3616 (fax)
E-mail: wmunck@munckbutrus.com



APPENDIX A

PENDING CLAIMS APPENDIX

1. For use in a transfer molding process of a type that uses a transfer mold to encapsulate portions of an integrated circuit within a molding compound, a method for using a pre-formed film in said transfer molding process, said method comprising the steps of:

providing a film of compliant material;
pre-forming said film of compliant material to at least approximately conform a shape of said film to a mold cavity surface of said transfer mold;
placing said pre-formed film of compliant material within said transfer mold adjacent to said mold cavity surface of said transfer mold; and
vacuum holding said pre-formed film of compliant material against said mold cavity surface of said transfer mold.

2. The method as set forth in Claim 1 wherein said step of pre-forming said film of compliant material is carried out immediately before said film is placed within said transfer mold.

3. (Cancelled).

4. The method as set forth in Claim 1 wherein said step of pre-forming said film of compliant material to at least approximately conform a shape of said film to a mold cavity surface of said transfer mold comprises one of: embossing said film and stamping said film.

5. The method as set forth in Claim 1 further comprising the steps of:
placing said transfer mold over an integrated circuit die on an integrated circuit substrate;
filling said mold cavity of said transfer mold with liquefied molding compound;
allowing said molding compound to solidify; and
removing said transfer mold from said integrated circuit die and said integrated circuit substrate after said molding compound has solidified.

6. (Cancelled).

7. For use in a transfer molding process of a type that uses a transfer mold to encapsulate portions of an integrated circuit within a molding compound, a method for using a pre-formed film in said transfer molding process, said method comprising the steps of:

providing a tape made of a film of compliant material;
pre-forming a plurality of portions of said tape to at least approximately conform a shape of each of said plurality of portions of said tape to a mold cavity surface of said transfer mold; and
placing one of said plurality of portions of said tape within said transfer mold adjacent to said mold cavity surface of said transfer mold.

8. The method as set forth in Claim 7 wherein said step of pre-forming said portion of said tape is carried out immediately before said portion of said tape is placed within said transfer mold.

9. The method as set forth in Claim 7 wherein said portion of said tape is pre-formed to a shape that approximately conforms to a shape of said mold cavity surface of said transfer mold.

10. The method as set forth in Claim 7 wherein said step of pre-forming said portion of said tape to at least approximately conform a shape of said portion of said tape to a mold cavity surface of said transfer mold comprises one of: embossing said portion of said tape and stamping said portion of said tape.

11. The method as set forth in Claim 7 further comprising the steps of:
placing said transfer mold over an integrated circuit die on an integrated circuit substrate;
filling said mold cavity of said transfer mold with liquefied molding compound;
allowing said molding compound to solidify; and
removing said transfer mold from said integrated circuit die and said integrated circuit substrate after said molding compound has solidified.

12. For use in a transfer molding process of a type that uses a top half of a transfer mold and a bottom half of a transfer mold to encapsulate portions of an integrated circuit within a molding compound, a method for using a pre-formed film in said transfer molding process, said method comprising the steps of:

providing a first film of compliant material;
pre-forming said first film of compliant material to at least approximately conform a shape of said first film to a mold cavity surface of said top half of said transfer mold;
placing said pre-formed first film of compliant material within said top half of said transfer mold adjacent to said mold cavity surface of said top half of said transfer mold;
providing a second film of compliant material;
pre-forming said second film of compliant material to at least approximately conform a shape of said second film to a mold cavity surface of said bottom half of said transfer mold;
placing said pre-formed second film of compliant material within said bottom half of said transfer mold adjacent to said mold cavity surface of said bottom half of said transfer mold; and
vacuum holding at least one of said pre-formed films of compliant material against at least one of said mold cavity surfaces of said transfer mold.

13. The method as set forth in Claim 12 wherein said step of pre-forming said first film of compliant material is carried out immediately before said first film is placed within said top half of said transfer mold; and

wherein said step of pre-forming said second film of compliant material is carried out before said second film is placed within said bottom half of said transfer mold.

14. (Cancelled).

15. The method as set forth in Claim 12 wherein said step of pre-forming said first film of compliant material to at least approximately conform a shape of said first film to a mold cavity surface of said top half of said transfer mold comprises one of: embossing said first film and stamping said first film; and

wherein said step of pre-forming said second film of compliant material to at least approximately conform a shape of said second film to a mold cavity surface of said bottom half of said transfer mold comprises one of: embossing said second film and stamping said second film.

16. The method as set forth in Claim 12 further comprising the steps of:
placing said top half of said transfer mold and said bottom half of said transfer mold around an integrated circuit die on an integrated circuit substrate to form a mold cavity around said integrated circuit die on said integrated circuit substrate;
filling said mold cavity of said transfer mold with liquefied molding compound;
allowing said molding compound to solidify; and
removing said transfer mold from said integrated circuit die and said integrated circuit substrate after said molding compound has solidified.

Claims 17-29 (Cancelled).

30. The method of Claim 1, wherein:
pre-forming the film comprises pre-forming a plurality of portions of the film to at least approximately conform a shape of each of the plurality of portions of the film to the mold cavity surface of the transfer mold; and
placing the pre-formed film within the transfer mold comprises placing one of the plurality of portions of the film within the transfer mold.

31. The method of Claim 30, further comprising cutting the pre-formed film to separate at least some of the plurality of portions of the film.

32. The method of Claim 7, further comprising cutting the pre-formed tape to separate at least some of the plurality of portions of the tape.

33. The method of Claim 7, wherein the film comprises a silicone coated latex saturated paper liner.

34. The method of Claim 12, wherein:
pre-forming the first film comprises pre-forming a plurality of portions of the first film to at least approximately conform a shape of each of the plurality of portions of the first film to the mold cavity surface of the top half of the transfer mold;
placing the pre-formed first film within the top half of the transfer mold comprises placing one of the plurality of portions of the first film within the top half of the transfer mold;
pre-forming the second film comprises pre-forming a plurality of portions of the second film to at least approximately conform a shape of each of the plurality of portions of the second film to the mold cavity surface of the bottom half of the transfer mold; and
placing the pre-formed second film within the bottom half of the transfer mold comprises placing one of the plurality of portions of the second film within the bottom half of the transfer mold.

35. The method of Claim 34, further comprising:
cutting the pre-formed first film to separate at least some of the plurality of portions of the first film; and
cutting the pre-formed second film to separate at least some of the plurality of portions of the second film.

36. The method of Claim 12, wherein:
each of the first and second films comprises a silicone coated latex saturated paper liner; and
pre-forming the first and second films comprises pre-forming the silicone coated latex saturated paper liners while edges of the films are unconstrained.

37. The method of Claim 5, wherein:
the vacuum holding causes the pre-formed film of compliant material to adhere to at least part of the mold cavity surface; and
the filling of the mold cavity with the liquefied molding compound causes the pre-formed film of compliant material to conform to the shape of the mold cavity surface.

DOCKET NO. 01-C-084 (STM101-01084)
SERIAL NO. 10/066,245
PATENT

APPENDIX B

EVIDENCE APPENDIX

None

DOCKET NO. 01-C-084 (STM101-01084)
SERIAL NO. 10/066,245
PATENT

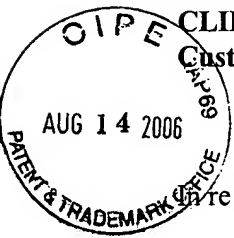
APPENDIX C

RELATED PROCEEDINGS APPENDIX

None

DOCKET NO.: 01-C-01084
CLIENT NO.: STMI01-01084
Customer No.: 30425

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Where application of: : HARRY MICHAEL SIEGEL, ET AL.
Serial No. : 10/066,245
Filed : January 31, 2002
For : METHOD FOR USING A PRE-FORMED FILM IN A
TRANSFER MOLDING PROCESS FOR AN INTEGRATED
CIRCUIT (AS AMENDED)
Group No. : 1732
Examiner : Angela Y. Ortiz

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

The undersigned hereby certifies that the following documents:

1. Substitute Appeal Brief; and
2. Postcard Receipt

relating to the above application, were deposited as "First Class Mail", with the United States Postal Service, addressed to: MAIL STOP APPEAL BRIEF - PATENTS, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on **August 11, 2006**.

Date:

August 11, 2006

Date:

Aug. 11, 2006

P.O. Box 802432
Dallas, Texas 75380
Phone: (972) 628-3600
Fax: (972) 628-3616
E-mail: wmunck@munckbutrus.com

Kathleen Porter
Mailer
William A. Munck
William A. Munck, Esq.
Reg. No. 39,308